

Task 467
Explosive Ordnance Disposal/Low Intensity Conflict
Candidate Project Summary

Project Title: Non-Explosive Cartridge

Submitting Organization: NAVEODTECHDIV
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Specific Technical/Operational Need: A need exists for a non-explosive means of functioning existing EOD tools while still providing the same performance. Current EOD tools use a standard Caliber .50 electric cartridge, supplemental charges (initiated by standard cartridges), small arms rounds, etc. The use of hazardous, energetic materials presents several problems the EOD community; difficulty getting into OCONUS theaters, (Southwest Asia as an example), difficulty getting new, or non-standard items added to authorizations, etc.

The Non-Explosive cartridge presently being developed by Raytheon E-Systems through an OST program shows promise as a substitute for some of the existing systems in areas that would otherwise restrict the choices of tools for the EOD technician.

Proposed Technical Approach: We propose to partner with Raytheon E-Systems on the further development of the Non-Explosive cartridge for use in the 90MM Water Cannon project. One task on this project is to redesigning the breech system to accommodate alternate initiating cartridges to make it compatible with other first responder/EOD agencies. Presently, the 90MM uses both a standard caliber .50 electric cartridge and a supplemental charge to provide the desired velocity. It is believed that a single Non-Explosive cartridge could be developed to provide the same performance without use of propellants. Present breech dimensions will accommodate the expected cartridge size without changing performance

Expected Performance: Develop a non-explosive cartridge that will provide the present capabilities without the use of propellants. The design will remain within the breech redesign areas and will not require a major modification to the existing system.

Existing Capabilities: Currently, EOD tools use propellants as the main drivers for work. In some cases such as the 90MM water cannon, a supplemental charge of smokeless powder is used to provide additional power. (Some tools use high explosives as well; however they have not been considered within the scope of this project). With the use of propellants, such issues as storage and transportation become major obstacles to be dealt with.

Schedule (Major Milestones):

TASK	FY99				FY00		
	1st	2nd	3rd	4th	1st	2nd	3rd
Design & Manuf. Components	■	■	■				
Develop Test Plan		■	■	■			
Test & User Evaluation				■	■	■	
Documentation						■	■

Estimated Cost: FY99: \$350K FY00: \$50K Total: \$400K

Potential Performer (Gov't): NAVEODTECHDIV, Code 50, Indian Head, MD.

Potential Performer (Contractor): Raytheon E-Systems, Washington, D.C.